

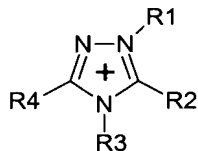
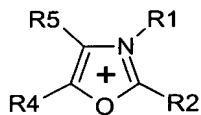
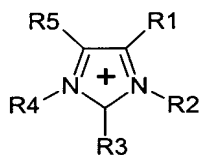
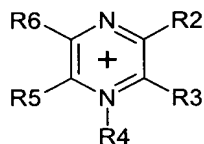
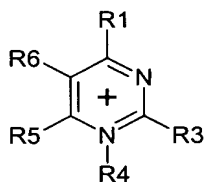
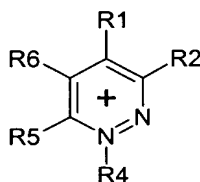
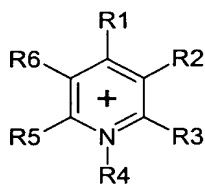
## LISTING OF CLAIMS

1. (Previously Presented) An ionic liquid of the general formula



wherein:

$K^+$  is a cation selected from:



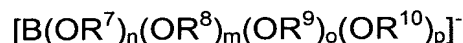
wherein

$R^1$  to  $R^6$  are identical or different and are each individually

- H,
- a halogen,

- an alkyl radical ( $C_1$  to  $C_8$ ), which is unsubstituted, or which is partially or fully substituted by F, Cl,  $N(C_nF_{(2n+1-x)}H_x)_2$ ,  $O(C_nF_{(2n+1-x)}H_x)$ ,  $SO_2(C_nF_{(2n+1-x)}H_x)$  or  $C_nF_{(2n+1-x)}H_x$  wherein  $1 < n < 6$  and  $0 < x \leq 13$
- a phenyl radical which is unsubstituted or which is partially or fully substituted by F, Cl,  $N(C_nF_{(2n+1-x)}H_x)_2$ ,  $O(C_nF_{(2n+1-x)}H_x)$ ,  $SO_2(C_nF_{(2n+1-x)}H_x)$  or  $C_nF_{(2n+1-x)}H_x$  wherein  $1 < n < 6$  and  $0 < x \leq 13$ , or
- one or more pairs of adjacent  $R^1$  to  $R^6$  can also be an alkylene or alkenylene radical and having up to 8 C atoms, wherein the radical is unsubstituted or partially or fully substituted by halogen,  $N(C_nF_{(2n+1-x)}H_x)_2$ ,  $O(C_nF_{(2n+1-x)}H_x)$ ,  $SO_2(C_nF_{(2n+1-x)}H_x)$  or  $C_nF_{(2n+1-x)}H_x$  wherein  $1 < n < 6$  and  $0 < x \leq 13$

wherein  $A^-$  is an anion selected from



wherein

$0 \leq n, m, o, p \leq 4$ , and  $m+n+o+p=4$ , and

$R^7$  to  $R^{10}$  are different or identical and are each, individually:

an aromatic ring selected from a phenyl, anthracenyl and phenanthrenyl ring, which is unsubstituted, or which is monosubstituted or polysubstituted by  $C_nF_{(2n+1-x)}H_x$ , wherein  $1 < n < 6$  and  $0 < x \leq 13$ , or halogen,

an aromatic heterocyclic ring selected from a pyridyl, pyrazyl and pyrimidyl ring, which is unsubstituted, or which is mono-substituted or polysubstituted by  $C_nF_{(2n+1-x)}H_x$ , wherein  $1 < n < 6$  and  $0 < x \leq 13$ , or halogen,

or

an alkyl radical ( $C_1$  to  $C_8$ ), which is unsubstituted, or which is partially or fully substituted by F, Cl,  $N(C_nF_{(2n+1-x)}H_x)_2$ ,  $O(C_nF_{(2n+1-x)}H_x)$ ,  $SO_2(C_nF_{(2n+1-x)}H_x)$ , or  $C_nF_{(2n+1-x)}H_x$ , wherein  $1 < n < 6$  and  $0 < x \leq 13$ ,

and wherein one or more pairs of  $R^7$  to  $R^{10}$  can also form

an aromatic ring selected from a anthracenylene and phenanthrenylene ring, which is unsubstituted or an aromatic ring selected from a phenylene, naphthylene, anthracenylene and phenanthrenylene ring which is monosubstituted or polysubstituted by  $C_nF_{(2n+1-x)}H_x$ , wherein  $1 < n < 6$  and  $0 < x \leq 13$ , or halogen,

an aromatic heterocyclic ring selected from a pyridylene, pyrazylene and pyrimidylene ring, which is unsubstituted, or which is mono-substituted or polysubstituted by  $C_nF_{(2n+1-x)}H_x$ , wherein  $1 < n < 6$  and  $0 < x \leq 13$ , or halogen,

or

an alkylene or alkenylene radical having up to 8 C atoms and which is unsubstituted or which is partially or fully substituted by halogen,  $N(C_nF_{(2n+1-x)}H_x)_2$ ,  $O(C_nF_{(2n+1-x)}H_x)$ ,  $SO_2(C_nF_{(2n+1-x)}H_x)$  or  $C_nF_{(2n+1-x)}H_x$  wherein  $1 < n < 6$  and  $0 < x \leq 13$

or  $OR^7$  to  $OR^{10}$ , individually or together,

are an aromatic having 6 to 14 C atoms and which is a dicarboxyl, oxysulfonyl or oxycarbonyl radical, which is unsubstituted, or which is partially or fully substituted by F, Cl,  $N(C_nF_{(2n+1-x)}H_x)_2$ ,  $O(C_nF_{(2n+1-x)}H_x)$ ,  $SO_2(C_nF_{(2n+1-x)}H_x)$  or  $C_nF_{(2n+1-x)}H_x$ , wherein  $1 < n < 6$  and  $0 < x \leq 13$

or

are aliphatic having 1 to 6 C atoms and which is a carboxyl, dicarboxyl, oxysulfonyl or oxycarbonyl radical, which is

unsubstituted, or which is partially or fully substituted by F, Cl,  $N(C_nF_{(2n+1-x)}H_x)_2$ ,  $O(C_nF_{(2n+1-x)}H_x)$ ,  $SO_2(C_nF_{(2n+1-x)}H_x)$  or  $C_nF_{(2n+1-x)}H_x$ , wherein  $1 < n < 6$  and  $0 < x \leq 13$ .

2. **(original claim)** An ionic liquid according to claim 1, wherein at least one of  $R^1$  to  $R^6$  of the cation is an alkyl radical which is unsubstituted or partially or fully substituted by F, Cl,  $N(C_nF_{(2n+1-x)}H_x)_2$ ,  $O(C_nF_{(2n+1-x)}H_x)$ ,  $SO_2(C_nF_{(2n+1-x)}H_x)$  or  $C_nF_{(2n+1-x)}H_x$  wherein  $1 < n < 6$  and  $0 < x \leq 13$ .

3. **(original claim)** An ionic liquid according to claim 1, wherein at least one of  $R^1$  to  $R^6$  of the cation is a phenyl radical which is unsubstituted or partially or fully substituted by F, Cl,  $N(C_nF_{(2n+1-x)}H_x)_2$ ,  $O(C_nF_{(2n+1-x)}H_x)$ ,  $SO_2(C_nF_{(2n+1-x)}H_x)$  or  $C_nF_{(2n+1-x)}H_x$  wherein  $1 < n < 6$  and  $0 < x \leq 13$ .

4. **(original claim)** An ionic liquid according to claim 1, wherein at least a pair of  $R^1$  to  $R^6$  of the cation is an alkylene or alkenylene radical which is unsubstituted or partially or fully substituted by halogen,  $N(C_nF_{(2n+1-x)}H_x)_2$ ,  $O(C_nF_{(2n+1-x)}H_x)$ ,  $SO_2(C_nF_{(2n+1-x)}H_x)$  or  $C_nF_{(2n+1-x)}H_x$  wherein  $1 < n < 6$  and  $0 < x \leq 13$ .

5. **(original claim)** An ionic liquid according to claim 1, wherein at least one of  $R^7$  to  $R^{10}$  of the anion is an alkyl radical which is unsubstituted or partially or fully substituted by F, Cl,  $N(C_nF_{(2n+1-x)}H_x)_2$ ,  $O(C_nF_{(2n+1-x)}H_x)$ ,  $SO_2(C_nF_{(2n+1-x)}H_x)$ , or  $C_nF_{(2n+1-x)}H_x$ , wherein  $1 < n < 6$  and  $0 < x \leq 13$ .

6. **(original claim)** An ionic liquid according to claim 1, wherein at least one pair of  $R^7$  to  $R^{10}$  of the anion is an alkylene or alkenylene radical which is unsubstituted or partially or fully substituted by a halogen,

$N(C_nF_{(2n+1-x)}H_x)_2$ ,  $O(C_nF_{(2n+1-x)}H_x)$ ,  $SO_2(C_nF_{(2n+1-x)}H_x)$  or  $C_nF_{(2n+1-x)}H_x$  wherein  $1 < n < 6$  and  $0 < x \leq 13$ .

7. **(Previously Presented)** An ionic liquid according to claim 1, wherein at least one of  $R^7$  to  $R^{10}$  of the anion is an aromatic ring selected from a phenyl, anthracenyl and phenanthrenyl ring, which is unsubstituted, or which is monosubstituted or polysubstituted by  $C_nF_{(2n+1-x)}H_x$ , wherein  $1 < n < 6$  and  $0 < x \leq 13$ , or by a halogen.

8. **(Previously Presented)** An ionic liquid according to claim 1, wherein at least one of  $R^7$  to  $R^{10}$  of the anion is an aromatic heterocyclic ring selected from a pyridyl, pyrazyl and pyrimidyl ring, which is unsubstituted, or which is monosubstituted or polysubstituted by  $C_nF_{(2n+1-x)}H_x$ , wherein  $1 < n < 6$  and  $0 < x \leq 13$ , or {F, Cl or Br}.

9. **(Previously Presented)** An ionic liquid according to claim 1, wherein at least one pair of  $R^7$  to  $R^{10}$  of the anion is an aromatic ring selected from an anthracenylene and phenanthrenylene ring, which is unsubstituted or a phenylene, naphthylene, anthracenylene and phenanthrenylene ring, which is monosubstituted or polysubstituted by  $C_nF_{(2n+1-x)}H_x$ , wherein  $1 < n < 6$  and  $0 < x \leq 13$ , or halogen.

10. **(original claim)** An ionic liquid according to claim 1, wherein at least one pair of  $R^7$  to  $R^{10}$  of the anion is an aromatic heterocyclic ring selected from a pyridylene, pyrazylene and pyrimidylene ring, which is unsubstituted, or which is mono-substituted or polysubstituted by  $C_nF_{(2n+1-x)}H_x$ , wherein  $1 < n < 6$  and  $0 < x \leq 13$ , or by halogen.

11. **(withdrawn)** An electrochemical cell comprising a cathode, an anode, a separator, and the ionic liquid of claim 1.

12. **(withdrawn)** A supercapacitor comprised of at least a pair of electrodes, a separator, and the ionic liquid of claim 1.

13. **(withdrawn)** An electrolyte composition comprising an ionic liquid of claim 1 and an aprotic solvent.

14. **(withdrawn)** An electrolyte composition comprising an ionic liquid of claim 1 and a conductive salt.

15. **(original claim)** A method for making an ionic liquid according to claim 1, comprising reacting a chloride salt of the formula  $K^+Cl^-$  with a lithium salt of the formula  $Li^+A^-$  within an aprotic solvent.

16. **(Currently Amended)** ~~A compound~~ An ionic liquid according to claim 1 selected from :

1-ethyl-3-methylimidazolium bis [1,2-benzenediolato-O,O'] borate,

1-ethyl-3-methylimidazolium bis[oxalato]borate, and

1-ethyl-3-methylimidazolium bis[salicylato]borate.

17. **(Previously Presented)** A compound according to claim 16, wherein said compound is:

1-ethyl-3-methylimidazolium bis [1,2-benzenediolato-O,O'] borate.

18. **(currently amended)** A compound according to claim 1, wherein A<sup>-</sup> is bis[oxalato]borate,

or

bis[salicylate]borate.

19. **(New)** A compound according to claim 1, wherein A<sup>-</sup> is bis[salicylate]borate.

20. **(New)** A compound according to claim 16, wherein said compound is:

1-ethyl-3-methylimidazolium bis[oxalato]borate.

21. **(New)** A compound according to claim 1, wherein OR<sup>7</sup> to OR<sup>10</sup>, individually or together,

are aliphatic having 1 to 6 C atoms and which is a carboxyl, dicarboxyl, oxysulfonyl or oxycarbonyl radical, which is unsubstituted, or which is partially or fully substituted by F, Cl, N(C<sub>n</sub>F<sub>(2n+1-x)</sub>H<sub>x</sub>)<sub>2</sub>, O(C<sub>n</sub>F<sub>(2n+1-x)</sub>H<sub>x</sub>), SO<sub>2</sub>(C<sub>n</sub>F<sub>(2n+1-x)</sub>H<sub>x</sub>) or C<sub>n</sub>F<sub>(2n+1-x)</sub>H<sub>x</sub>, wherein 1<n<6 and 0<x≤13.